To: McComb, Martin[McComb.Martin@epa.gov]

Cc: Bahrman, Sarah[Bahrman.Sarah@epa.gov]; Walt Baker[wbaker@utah.gov]

From: Erica Gaddis

Sent: Sun 8/9/2015 4:46:45 PM Subject: Re: Gold King Mine update

Our crew estimates the velocity of the river to be 2.3 to 2.7 mph at Four Corners. If that estimate is correct the earliest the bloom will arrive is 3:00pm this afternoon. Assuming the plume is slower than the river, it is more likely to be this evening. They are going to begin collecting samples at noon and will collect at 3 hour intervals unless we see a visual plume. Any help is estimating the travel time would be much appreciated.

On Sun, Aug 9, 2015 at 10:07 AM, McComb, Martin < McComb.Martin@epa.gov > wrote:

If this helps: our airplane was up this morning and could not identify a discernible leading edge.

M

Sent from my iPhone

On Aug 9, 2015, at 9:57 AM, Erica Gaddis < egaddis@utah.gov > wrote:

Sarah,

Walt just went into airplane mode and won't be available for 3 hours. We have a crew at the state line and I need to decide if they should stay to wait for the plume. Could you answer the following?

- \* Do we have a velocity estimate of the plume in the San Juan River? The 4mph on the last EPA report appears to be for the Animas but it is unclear.
- \* Is it correct that the plume reached Farmington at 9am and Kirtland at 4pm? If so, then the travel time would be approximately 1.4 mph. The Utah stateline is 55 stream miles from Kirtland. Assuming 1.42 mph, the plume will enter Utah at 1:00am tomorrow (Monday) morning. If we assume 4 mph then the plume should have entered Utah at 6:00am this morning. The river is very turbid due to rains and our crew does not think they will be able to visually see the plume when it arrives. They describe the river now as red, turbid, and consistency of a smoothie.
- \* Is it possible to get a velocity measurement from the USGS gage at Four Corners? The gage reports discharge and I can not find the rating curve or cross-section to back out velocity.
- \* Does EPA have any new imagery to help us tell where the plume is now?
- \* Could you put me in touch with whoever is estimating travel time for NM DEQ?

Thank you, Erica On Sun, Aug 9, 2015 at 9:44 AM, Bahrman, Sarah < Bahrman. Sarah@epa.gov> wrote:

Hi Walt- that is an estimate from New Mexico DEQ. I will work to get you our latest estimate asap.

Thanks

On Aug 9, 2015, at 9:23 AM, Walt Baker <wbaker@utah.gov> wrote:

Sarah,

According to our mapping it is only about 75 stream miles from Farmington to the Utah border. At a velocity of 3 mph we would expect the plume to hit Utah late morning today. What is the 5:00 a.m. Monday estimate based on and who made it.

Walt

Sent from my iPhone

On Aug 9, 2015, at 8:53 AM, Bahrman, Sarah < Bahrman.Sarah@epa.gov > wrote:

Hi Walt-

I understand that you're frustrated. We are working to determine ways to get information out faster, but we also want to make sure the information we are releasing is accurate and interpreted, and that takes some time.

The next set of data should be out later this morning. I had told you more data would be out yesterday and I'm sorry that did not happen. I will share info with you as soon as I get it.

As for the plume, the last location I heard was it was past Kirtland, NM. The latest travel time estimate I heard was the leading edge was expected to reach the UT border at about 5am Monday.

I want to reiterate that we have heard from you and many others that info is coming out too slowly, and we will do our best to change that with more regular communication.

Thanks Sarah On Aug 9, 2015, at 6:29 AM, Walter Baker <wbaker@utah.gov> wrote:

Sarah,

I am increasingly frustrated. No new qualitative data has been posted by EPA in over 30 hours. Even the most basic of pH data. There has been no update in pictures since last Thursday even though EPA flies the rivers twice daily. I have no idea where the plume is or when it will reach certain locations. I was told yesterday I would be given non-public rights to info at the incident webpage. Communication with my state has been poor. Am I missing communication that has happened or data that's out there somewhere?

What will EPA do to change this condition?

Walt

Sent from my iPad

On Aug 8, 2015, at 8:53 PM, Bahrman, Sarah <a href="mailto:Sarah@epa.gov">Bahrman.Sarah@epa.gov</a> wrote:

Wanted to make sure you all received this. Thanks

Begin forwarded message:

From: "Cristiano, Gina" < Cristiano. Gina@epa.gov>

Date: August 8, 2015 at 8:49:01 PM MDT

To: "SweetieMarbury@DurangoGov.org"

<SweetieMarbury@DurangoGov.org>,

<sup>&</sup>quot;chris@frontier.net" < chris@frontier.net>,

<sup>&</sup>quot;bgardner@silverton.co.us"

<sup>&</sup>lt;br/>
<br/>
bgardner@silverton.co.us>,

<sup>&</sup>quot;gwen.lachelt@co.laplata.co.us"

<sup>&</sup>lt;gwen.lachelt@co.laplata.co.us>,

<sup>&</sup>quot;julie.westendorff@co.laplata.co.us"

<sup>&</sup>lt;julie.westendorff@co.laplata.co.us>,

```
"brad.blake@co.laplata.co.us"
<brad.blake@co.laplata.co.us>,
"citycouncil@durangogov.org"
<citycouncil@durangogov.org>,
"ellen.roberts.senate@state.co.us"
<ellen.roberts.senate@state.co.us>,
"ipaul.brown.house@state.co.us"
<ipaul.brown.house@state.co.us>,
"ron.leblanc@durangogov.org"
<ron.leblanc@durangogov.org>,
"joe.kerby@co.laplata.co.us"
<ioe.kerby@co.laplata.co.us>,
"sean.smith@co.laplata.co.us"
<sean.smith@co.laplata.co.us>,
"sanjuancounty@frontier.net"
<sanjuancounty@frontier.net>, Personal Email/Ex. 6
  Personal Email/Ex. 6
"brad.cochennet@PSMedicalCenter.org"
<brad.cochennet@PSMedicalCenter.org>,
"mwhiting@archuletacounty.org"
<mwhiting@archuletacounty.org>,
"ann.bruzzese@PSMedicalCenter.org"
<ann.bruzzese@PSMedicalCenter.org>,
"richard@population-matters.org" < richard@population-
matters.org>, "jodi.scarpa@psmedicalcenter.org"
<jodi.scarpa@psmedicalcenter.org>,
               Personal Email/Ex. 6
"bobbylieb@frontier.net" <bbbylieb@frontier.net>,
"byrd s@fortlewis.edu" <byrd s@fortlewis.edu>,
"director@sjcph.org" <director@sjcph.org>,
"sarah.jacobson@co.laplata.co.us"
<sarah.jacobson@co.laplata.co.us>,
"oem@sanjuancountycolorado.us"
<oem@sanjuancountycolorado.us>, Claire Macpherson
<CMacpherson@sjbhd.org>, "Ackerman, Joyce"
<<u>Ackerman.Joyce@epa.gov</u>>, "Allen, HarryL"
<<u>Allen.HarryL@epa.gov</u>>,
"Allison.Majure@state.nm.us"
<Allison.Majure@state.nm.us>, "Bahrman, Sarah"
<Bahrman.Sarah@epa.gov>, "Bohan, Suzanne"
<bohan.suzanne@epa.gov>, "bsmartinez@fs.fed.us"
<bsmartinez@fs.fed.us>, "Buhl, Rick"
<Buhl.Rick@epa.gov>, Butch Knowlton-LaPlata Co EM
<knowltonbk@co.laplata.co.us>, "Card, Joan"
<Card.Joan@epa.gov>, "Chavez, Luke"
<Chavez.Luke@epa.gov>, "Copeland, Michael"
```

```
< Copeland.Michael@epa.gov >, "Cristiano, Gina"
```

- < Cristiano. Gina@epa.gov >, "Crossland, Ronnie"
- <<u>Crossland.Ronnie@epa.gov</u>>, "<u>dariotti@utah.gov</u>"
- <a href="mailto:</a> <a href="mailto:dariotti@utah.gov">, "david.kreutzer@state.co.us"</a>
- <a href="mailto:</a> <a href="mailto:david.kurz@state.co.us">, "david.kurz@state.co.us"</a>
- <<u>david.kurz@state.co.us</u>>, "Dhieux, Joyel"
- <<u>Dhieux.Joyel@epa.gov</u>>, "dietrich@utah.gov"
- <a href="mailto:</a> <a href="mailto:dietrich@utah.gov">doug.jamison@state.co.us"</a>
- <<u>doug.jamison@state.co.us</u>>, "<u>dspangler@utah.gov</u>"
- <<u>dspangler@utah.gov</u>>, "<u>dwong@utah.gov</u>"
- <<u>dwong@utah.gov</u>>, "<u>egaddis@utah.gov</u>"
- <egaddis@utah.gov>, "Eoc, Epahq"
- <<u>Eoc.Epahq@epa.gov</u>>, "Faulk, Libby"
- < Faulk. Libby@epa.gov >, "Foster, Althea"
- < Foster. Althea@epa.gov >, "Garcia, David"
- <<u>Garcia.David@epa.gov</u>>,
- "gary.baughman@state.co.us"
- <gary.baughman@state.co.us>, "Gleason, Michael"
- <Gleason.Michael@epa.gov>,
- "greg.naugle@state.co.us" < greg.naugle@state.co.us >,
- "Griswold, Hays" < Griswold. Hays@epa.gov >, "Hayes,
- Mark" < hayes.mark@epa.gov>, "Hestmark, Martin"
- < Hestmark. Martin@epa.gov >, "jason.king@state.co.us"
- <jason.king@state.co.us</pre>>, Joshua Allan BIA
- <joshua.allan@bia.gov>, "Kahn, Lisa"
- < Kahn.Lisa@epa.gov>, "karin.mcgowan@state.co.us"
- <karin.mcgowan@state.co.us>, "KBousfield@utah.gov"
- < KBousfield@utah.gov>, "Kortuem, Patrice"
- < Kortuem. Patrice@epa.gov >, "kshelley@utah.gov"
- <kshelley@utah.gov>, "Land, Kelcey"
- <<u>Land.Kelcey@epa.gov</u>>, "<u>Laura.Rendon@state.nm.us</u>"
- <<u>Laura.Rendon@state.nm.us</u>>, Liane Jollon San Juan

Basin HD < liollon@sjbhd.org>, "llamb@utah.gov"

- <llamb@utah.gov>, "Lloyd, Lisa"
- <<u>Lloyd.Lisa@epa.gov</u>>, "Logan, Paul"
- <Logan.Paul@epa.gov>, "Madigan, Andrea"
- < <u>Madigan. Andrea@epa.gov</u>>,
- "martha.rudolph@state.co.us"
- <martha.rudolph@state.co.us>, "McComb, Martin"
- <McComb.Martin@epa.gov>, "McGrath, Shaun"
- <McGrath.Shaun@epa.gov>,
- "meghan.trubee@state.co.us"
- <meghan.trubee@state.co.us>, "mjblanchard@fs.fed.us"
- <miblanchard@fs.fed.us>, "Mohr, Mindy"
- < Mohr.Mindy@epa.gov>, "monica.sheets@state.co.us"
- <monica.sheets@state.co.us>, "Myers, Craig"

```
< Myers.Craig@epa.gov >, "Mylott, Richard"
```

- < Mylott.Richard@epa.gov >, "Nattis, Randy"
- < Nattis.Randy@epa.gov >, "O'Connor, Darcy"
- < oconnor.darcy@epa.gov>, "Ostrander, David"
- <<u>Ostrander.David@epa.gov</u>>,
- "patrick.j.pfaltzgraff@state.co.us"
- <patrick.j.pfaltzgraff@state.co.us>,
- "Patrick.Longmire@state.nm.us"
- < <u>Patrick.Longmire@state.nm.us</u>>, R8 Documentation

## Unit Leader

- <<u>R08 Documentation Unit Leader@epa.gov</u>>,
- "Restivo, Angela" < <u>Restivo. Angela@epa.gov</u>>, "Russo,
- Rebecca" < Russo. Rebecca@epa.gov >, "Saldenha,
- Jasmine" < Saldenha. Jasmine@epa.gov >, "Sandoval,
- Joni" < Sandoval.Joni@epa.gov >, Sid Caesar BIA
- < sid.caesar@bia.gov >, "Sierra, Eddie"
- <<u>Sierra.Eddie@epa.gov</u>>, "Sisk, Richard"
- < Sisk.Richard@epa.gov >, "Smith, Paula"
- <<u>Smith.Paula@epa.gov</u>>, "Stavnes, Sandra"
- < Stavnes. Sandra@epa.gov >, "Stevenson, Peter"
- <<u>Stevenson.Peter@epa.gov</u>>, "Thomas, Deb"
- <thomas.debrah@epa.gov>, "tojohns@southernute-
- nsn.gov" <tojohns@southernute-nsn.gov>,
- "tyson.ingles@state.co.us" <tyson.ingles@state.co.us>,
- "Videtich, Callie" < <u>Videtich.Callie@epa.gov</u>>, "Ward,
- W. Robert" < Ward.Robert@epa.gov>,
- "warren.smith@state.co.us"
- <warren.smith@state.co.us>, "Way, Steven"
- <way.steven@epa.gov>, "wbaker@utah.gov"
- <wbaker@utah.gov>, "Webster, Susan"
- <webster.susan@epa.gov>, "Werner, Phillip"
- <<u>Werner.Phillip@epa.gov</u>>,
- "Allison O'Brien@ios.doi.gov"
- <Allison O'Brien@ios.doi.gov>,
- "Amanda.M.LeMonde@uscg.mil"
- <Amanda.M.LeMonde@uscg.mil>,
- "Angelique.M.Geyer@uscg.mil"
- < Angelique.M.Gever@uscg.mil >, "Atencio, Kathie"
- <Atencio.Kathie@epa.gov>, Beth Alferink
- <br/>
  <br/>
  beth.alferink@nrc.gov>,
- "Bethany.o'brien@aphis.usda.gov"
- <Bethany.o'brien@aphis.usda.gov>,
- "bill.markley@state.sd.us" <bill.markley@state.sd.us>,
- "blovelace2@mt.gov" <blovelace2@mt.gov>, Bradley
- King < bfk2@cdc.gov>, "Bryan.E.Dailey@uscg.mil"
- <Bryan.E.Dailey@uscg.mil>, "charlie.henry@noaa.gov"

```
<charlie.henry@noaa.gov>, "Poulet, Chris"
```

< Poulet. Chris@epa.gov >,

"christine.vanhorn@ch.doe.gov"

<<u>christine.vanhorn@ch.doe.gov</u>>, Corey Butler

<guz5@cdc.gov>, "cwhitman@mhanation.com"

<<u>cwhitman@mhanation.com</u>>,

"D L Anderson@nps.gov" < D L Anderson@nps.gov>,

"dan.feighert@dhs.gov" <dan.feighert@dhs.gov>,

"dglatt@nd.gov" <dglatt@nd.gov>,

"dave.hard@state.co.us" < dave.hard@state.co.us >,

"Ostrander, David" < Ostrander. David@epa.gov >,

"Dorian, David" < Dorian. David@epa.gov>,

"david.everett@inl.gov" <david.everett@inl.gov>,

"donna.vallejos@gsa.gov" <donna.vallejos@gsa.gov>,

"eje1@cdc.gov" <eje1@cdc.gov>, "Cristiano, Gina"

<<u>Cristiano.Gina@epa.gov</u>>, "Goodrick, John"

< Goodrick. John@epa.gov >, "greg.stasinos@state.co.us"

<greg.stasinos@state.co.us>,

"Gregory.Schweitzer@noaa.gov"

<<u>Gregory.Schweitzer@noaa.gov</u>>,

"hauter.nancy@dol.gov" < hauter.nancy@dol.gov>,

"Jason.kozal@nrc.gov" < Jason.kozal@nrc.gov>,

"jennifer.c.chang@usace.army.mil"

<jennifer.c.chang@usace.army.mil>, Joe Hunter

<joe.hunter@wyo.gov>, John Dean

<<u>deanjg@id.doe.gov</u>>, "john.gibbons@hhs.gov"

<iohn.gibbons@hhs.gov>, "John.Lomnicky@noaa.gov"

<John.Lomnicky@noaa.gov>,

"John\_Wegrzyn@fws.gov" < John\_Wegrzyn@fws.gov>,

## "Kelpis, Elizabeth D - APHIS

<Elizabeth.D.Kelpis@aphis.usda.gov>"

<Elizabeth.D.Kelpis@aphis.usda.gov>,

"kerry.kimble@state.co.us" < kerry.kimble@state.co.us>,

"kim.mcintosh@state.sd.us"

<kim.mcintosh@state.sd.us>, "klee@wyo.gov"

<klee@wyo.gov>, "kmuenchow@fs.fed.us"

<kmuenchow@fs.fed.us>, "kzamba@fs.fed.us"

< kzamba@fs.fed.us >, "Williams, Laura"

<williams.laura@epa.gov>, "marybeth.vasco@dhs.gov"

<marybeth.vasco@dhs.gov>,

"michael.k.sams@uscg.mil"

<michael.k.sams@uscg.mil>,

"Michael.R.Jolly@uscg.mil"

<Michael.R.Jolly@uscg.mil>, "mriley@utah.gov"

<mriley@utah.gov>, "myk3@cdc.gov"

<myk3@cdc.gov>, "mzucker@utah.gov"

```
<mzucker@utah.gov>, "Nisley, Barbara"
<Nisley.Barbara@epa.gov>, "paige.doelling@noaa.gov"
<paige.doelling@noaa.gov>, Patrick Reid
d@utah.gov>, "pete.bakersky@dhs.gov"
<pete.bakersky@dhs.gov>, "Ledbetter, Ray"
<Ledbetter.Ray@epa.gov>, "rdeboer@nd.gov"
<<u>rdeboer@nd.gov</u>>, "<u>rlambert@nd.gov</u>"
<<u>rlambert@nd.gov</u>>, "<u>robert e willis@usace.army.mil</u>"
<robert e willis@usace.army.mil>,
"robert f stewart@ios.doi.gov"
<robert f stewart@ios.doi.gov>,
"ronald.pinheiro@hhs.gov" <ronald.pinheiro@hhs.gov>,
"ronnie.warren@dhs.gov" <ronnie.warren@dhs.gov>,
"sheris@mt.gov" <sheris@mt.gov>, "sknecht@mt.gov"
<sknecht@mt.gov>, "stanley.sheila.a@dol.gov"
<stanley.sheila.a@dol.gov>, "tina.titze@state.sd.us"
<tina.titze@state.sd.us>, "todd.m.peterson@uscg.mil"
<todd.m.peterson@uscg.mil>, "Tom.andrews@nrc.gov"
<Tom.andrews@nrc.gov>, "victoria.deal@gsa.gov"
<victoria.deal@gsa.gov>,
"William.D.Harlon@usace.army.mil"
<<u>William.D.Harlon@usace.army.mil</u>>, "Art Deyo
(adeyo@utah.gov)" <adeyo@utah.gov>, Bruce Young
<bmyoung@anl.gov>, "Chris.Hoidal@dot.gov"
<Chris.Hoidal@dot.gov>, "christopher.foltz@noaa.gov"
<christopher.foltz@noaa.gov>, "coyporter@utah.gov"
<coyporter@utah.gov>, "Evans, Leroy M CIV USA
USARNORTH" < Leroy. Evanssr@us.army.mil>, George
```

## Personal Email/Ex. 6, Scott Binko

```
<scott.a.binko1@uscg.mil>,
```

<jerome.a.popiel@uscg.mil>,

Chew <george.e.chew.mil@mail.mil>, Jerome Popiel

Good Evening Everyone,

Please see the attached EPA statement for August 8th.

<sup>&</sup>quot;Scott.Carpenter@noaa.gov"

<sup>&</sup>lt;Scott.Carpenter@noaa.gov>, Terry Larson

<sup>&</sup>lt;terrence.larson@dot.gov>, "Theriault, Linda A Ms CIV

USA" < Linda. Theriault@us.army.mil>,

<sup>&</sup>quot;timothy.a.Dykstra@usace.army.mil"

<sup>&</sup>lt;timothy.a.Dykstra@usace.army.mil>, Tom Finch

<sup>&</sup>lt;thomas.finch@dot.gov>

Also, some of you may have already heard through other channels but, there is pH, dissolved metals and other information on the website – <a href="https://www.epaosc.org/goldkingmine">www.epaosc.org/goldkingmine</a>.

Thank you,

Gina Cristiano

Emergency Response & Planning Coordinator

**EPA Region 8** 

303-312-6688

<GoldKingMineUpdate 080815.pdf>

--

Erica Brown Gaddis, Ph.D.

**Assistant Director** 

Division of Water Quality
Utah Department of Environmental Quality
195 North 1950 West
Salt Lake City, Utah 84116
P 801.536.4314 | F 801.536.4301
C 801.205.3769

--

Erica Brown Gaddis, Ph.D.

**Assistant Director** 

**Division of Water Quality** 

Utah Department of Environmental Quality 195 North 1950 West Salt Lake City, Utah 84116 P 801.536.4314 | F 801.536.4301 C 801.205.3769